Point of Contact:
Jan Delaval
Librarian-Physical Sciences
CM1 1E01 Tel: 308-4498

=> fil hcaplus
FILE 'HCAPLUS' ENTERED AT 13:37:09 ON 19 DEC 2001


FILE COVERS 1907 - 19 Dec 2001 VOL 135 ISS 26
FILE LAST UPDATED: 18 Dec 2001 (20011218/ED)

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=> d 167 bib abs hitrn tot

L67 ANSWER 1 OF 3 HCAPLUS COPYRIGHT 2001 ACS
AN 2000:688451 HCAPLUS
DN 133:263511
TI Method for determining **substrate** by measuring **formazan** formation with **biosensor**
IN **Shinozuka, Naoki; Yokoyama, Toru; Nakamura, Kenji**
PA Sapporo Immuno Diagnostic Laboratory, Japan
SO PCT Int. Appl., 21 pp.
CODEN: PIXXD2
DT Patent
LA Japanese
FAN.CNT 1

| | PATENT NO. | KIND | DATE | APPLICATION NO. | DATE | |
|---|---|---|---|---|---|---|
| PI | WO 2000057166 | A1 | 20000928 | WO 1999-JP1392 | 19990319 | <-- |
| | W: AU, CA, JP, KR, PL, US | | | | | |
| | RW: AT, BE, CH, DE, ES, FR, GB, IT, NL, PT, SE | | | | | |
| | AU 9928538 | A1 | 20001009 | AU 1999-28538 | 19990319 | <-- |
| | EP 1164370 | A1 | 20011219 | EP 1999-909258 | 19990319 | <-- |
| | R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE, PT | | | | | |
| PRAI | WO 1999-JP1392 | A | 19990319 | <-- | | |

AB A rapid and convenient method is provided for detg. a **substrate** (e.g., **alanine**, **alc.**, **aldehyde**, **isocitric acid**, uridine-5'-diphospho-**glucose**, **galactose**, **formic acid**, glyceraldehyde-3-phosphate, **glycerol**, **glycerol**-3-phosphate, **glucose**, **glucose**-6-**phosphate**, **glutamic acid**, **cholesterol**, **sarcosine**, **sorbitol**, carbonic acid, **lactic acid**, 3-**hydroxybutyric acid**, **pyruvic**

**acid, phenylalanine, fructose,** 6-phosphogluconate, **formaldehyde, mannitol, malic acid, leucine**) by measuring the **formazan** formation with a **biosensor** without requiring a troublesome pretreatment. The **biosensor** comprises an electrode system formed by using an electroconductive material, and a reaction reagent consisting of at least a **dehydrogenase**, its coenzyme, an electron mediator and a **tetrazolium** salt. The **substrate** is detd. by detecting the final product, **formazan**, with the electrode system upon generating an enzyme reaction and a redox reaction by the reaction reagent and the **substrate** in a sample. A linear and excellent response current was obsd. for L-**phenylalanine** in 0-1mM with this **biosensor** using **phenylalanine dehydrogenase**. Diagrams describing the **sensor** assembly are given.

IT **50-00-0, Formaldehyde**, analysis **50-21-5, Lactic acid**, analysis **50-70-4, Sorbitol**, analysis **50-99-7, Glucose**, analysis **56-41-7, Alanine**, analysis **56-73-5, Glucose-6-phosphate 56-81-5, Glycerol**, analysis **56-86-0, Glutamic acid**, analysis **57-03-4, Glycerol**-3-phosphate **57-48-7**, D-**Fructose**, analysis **57-88-5, Cholesterol**, analysis **59-23-4, Galactose**, analysis **61-90-5, Leucine**, analysis **63-91-2, Phenylalanine**, analysis **64-18-6, Formic acid**, analysis **69-65-8, Mannitol 107-97-1, Sarcosine 127-17-3, Pyruvic acid**, analysis **133-89-1**, Uridine-5'-diphospho-**glucose 300-85-6, 3-Hydroxybutyric acid 320-77-4, Isocitric acid 463-79-6**, Carbonic acid, analysis **591-59-3 921-62-0 6915-15-7, Malic acid**
RL: ANT (Analyte); ANST (Analytical study)
(method for detg. **substrate** by measuring **formazan** formation with **biosensor**)

IT **58-68-4**, NADH **504-65-4, Formazan**
RL: ANT (Analyte); PEP (Physical, engineering or chemical process); ANST (Analytical study); PROC (Process)
(method for detg. **substrate** by measuring **formazan** formation with **biosensor**)

IT **9035-82-9, Dehydrogenase**
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(method for detg. **substrate** by measuring **formazan** formation with **biosensor**)

RE.CNT 10
RE
(1) British Technology Group Limited; GB 2231332 A HCAPLUS
(2) British Technology Group Limited; EP 471740 A HCAPLUS
(3) British Technology Group Limited; US 5298414 A HCAPLUS
(5) British Technology Group Limited; WO 9013634 A HCAPLUS
(7) British Technology Group Limited; US 5387515 A 1995 HCAPLUS
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L67 ANSWER 2 OF 3 HCAPLUS COPYRIGHT 2001 ACS
AN 1999:189260 HCAPLUS
DN 130:220187
TI Methods for the rapid detection and enumeration of viable microorganisms
IN Thacker, James D.
PA Thaco Research Ltd., USA
SO PCT Int. Appl., 27 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

| PATENT NO. | KIND | DATE | APPLICATION NO. | DATE |
|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| PI | WO 9912015 | A2 | 19990311 | WO 1998-US18588 | 19980904 |
| | WO 9912015 | A3 | 19990805 | | |
| | W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM | | | | |
| | RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG | | | | |
| | AU 9893056 | A1 | 19990322 | AU 1998-93056 | 19980904 |
| | EP 1017842 | A2 | 20000712 | EP 1998-945915 | 19980904 |
| | R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, FI | | | | |
| PRAI | US 1997-57657 | P | 19970905 | | |
| | WO 1998-US18588 | W | 19980904 | | |

AB The invention relates to methods for the rapid detection, including quant. detection, of actively respiring microorganisms. One embodiment comprises the steps of amplifying the presence of microorganisms utilizing microbial enzymic conversion of **tetrazolium** salts to **formazan** products, detecting the presence of **formazan** product utilizing specific antibodies raised to **formazans** and amplifying the presence of the primary antibody with a secondary antibody conjugated to a detectable marker. Another embodiment of the invention comprises the steps of amplifying the microorganisms utilizing microbial enzymic conversion of **tetrazolium** salts to **formazan** products, capturing digested microbial cell fragments with immobilized primary antibodies specific to the **formazans** and amplifying the presence of captured cell fragments with reporter antibodies prepd. from the primary antibodies conjugated to a detectable marker. Another embodiment of the invention comprises the steps of amplifying microorganisms utilizing microbial enzymic conversion of **tetrazolium** salt to **formazan** products, capturing digested microbial cell fragments on primary antibodies immobilized onto a solid **sensor** support and detecting the presence of captured cell fragments by the measurement of a change in either the phys., chem. elec. or optical properties of the **sensor** material.

IT **504-65-4, Formazan**
RL: ANT (Analyte); ANST (Analytical study)
(methods for the rapid detection and enumeration of viable microorganisms)

IT **58-68-4**, NADH
RL: ARG (Analytical reagent use); ANST (Analytical study); USES (Uses)
(methods for the rapid detection and enumeration of viable microorganisms)

IT **146-68-9, Iodonitrotetrazolium 298-83-9, Nitrotetrazolium** blue **298-96-4 6193-35-7**
RL: BPR (Biological process); BIOL (Biological study); PROC (Process)
(methods for the rapid detection and enumeration of viable microorganisms)

IT **50-99-7, Glucose**, biological studies
RL: BUU (Biological use, unclassified); BIOL (Biological study); USES (Uses)
(methods for the rapid detection and enumeration of viable microorganisms)

L67 ANSWER 3 OF 3 HCAPLUS COPYRIGHT 2001 ACS
AN 1988:93140 HCAPLUS
DN 108:93140
TI Apparatus for measurement of glutamate concentration
AU Nagata, Kazuhiko; Kurosaka, Keisuke; Tomita, Kosuke
CS Unitika, Japan
SO Shokuhin to Kagaku (1987), 29(9), 93-5
CODEN: SHTKAY
DT Journal; General Review

LA Japanese
AB A review with no refs. on detn. of **glutamic acid** in food products by enzyme assay, discussing enzyme reactions using glutamate **dehydrogenase**, glutamate oxidase, or glutamate decarboxylase and methods for measurement of enzyme reaction products (e.g. **formazan**, quinones, or CO2) for quantitation of corresponding **glutamic acid** concns.; the development and application of long-lasting enzyme **sensors** for detn. of **glutamic acid** is also discussed.
IT **56-86-0, Glutamic acid**, analysis
RL: ANT (Analyte); ANST (Analytical study)
(detn. of, in food, enzymic methods for)

=> fil biosis
FILE 'BIOSIS' ENTERED AT 13:40:35 ON 19 DEC 2001
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FILE COVERS 1969 TO DATE.
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNs) PRESENT
FROM JANUARY 1969 TO DATE.

RECORDS LAST ADDED: 12 December 2001 (20011212/ED)

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L73 ANSWER 1 OF 1 BIOSIS COPYRIGHT 2001 BIOSIS
AN 2001:153223 BIOSIS
DN PREV200100153223
TI Field calibration of optical **sensors** for **measuring** suspended sediment concentration in the western Mediterranean.
AU Guillen, J. (1); Palanques, A. (1); Puig, P. (1); de Madron, X. Durrieu; Nyffeler, F.
CS (1) Instituto de Ciencias del Mar, C.S.I.C., Paseo Joan de Borbo s/n, 08039, Barcelona: jorge@icm.csic.es Spain
SO Scientia Marina, (December, 2000) Vol. 64, No. 4, pp. 427-435. print. ISSN: 0214-8358.
DT Article
LA English
SL English
AB The water turbidity measured with optical methods (transmittance and backscattering) is usually expressed as beam attenuation coefficient (BAC) or **formazin** turbidity units (FTU). The transformation of these units to volumetric suspended sediment concentration (SSC) units is not straightforward, and accurate calibrations are required in order to obtain valuable information on suspended sediment distributions and fluxes. In this paper, data from field calibrations between BAC, FTU and SSC are presented and "best-fit" calibration curves are shown. These calibrations represent an "average" from different marine environments of the western Mediterranean (from estuary to continental slope). However, the general curves can only be applied for descriptive or semi-quantitative purposes. Comparison of turbidity measurements using the same **sensor** with different calibration ranges shows the advantage of simultaneously combining two instruments calibrated in different ranges when significant changes in suspended sediment concentrations are expected.
CC Ecology; Environmental Biology - General; Methods *07502
IT Major Concepts
Environmental Sciences
IT Methods & Equipment
nephelometry: analytical method
IT Miscellaneous Descriptors
field calibrations; light backscattering; light transmittance; suspended sediment concentration; water turbidity

GT Mediterranean Sea (North Atlantic, Atlantic Ocean): western

=> fil wpix
FILE 'WPIX' ENTERED AT 13:46:27 ON 19 DEC 2001
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FILE LAST UPDATED: 17 DEC 2001 <20011217/UP>
MOST RECENT DERWENT UPDATE 200174 <200174/DW>
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SEE http://www.derwent.com/dwpi/updates/dwpicov/index.html <<<

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L91 ANSWER 1 OF 2 WPIX COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 2000-602240 [57] WPIX
DNN N2000-445557 DNC C2000-180326
TI Simple, quick and accurate determination of substrate e.g. amino-acids and alcohol in various samples like blood, urine, food and environmental materials based on enzyme reaction with detection of produced **formazane** with **biosensor**.
DC B04 D16 J04 S03
IN **NAKAMURA, K; SHINOZUKA, N; YOKOYAMA, T**
PA (SAPP-N) **SAPPORO IMMUNO DIAGNOSTIC LAB**
CYC 17
PI WO 2000057166 A1 20000928 (200057)* JA 21p G01N027-327 <--
RW: AT BE CH DE ES FR GB IT NL PT SE
W: AU CA JP KR PL US
AU 9928538 A 20001009 (200103) G01N027-327 <--
ADT WO 2000057166 A1 WO 1999-JP1392 19990319; AU 9928538 A AU 1999-28538 19990319, WO 1999-JP1392 19990319
FDT AU 9928538 A Based on WO 200057166
PRAI WO 1999-JP1392 19990319
IC ICM **G01N027-327**
AB WO 200057166 A UPAB: 20001109
NOVELTY - Determination of a substrate comprises forming an electrode system using a conductive material, and a reaction reagent comprising at least a dehydrogenase, a coenzyme, an electron mediator and tetrazolium salts, in which an enzyme reaction and a redox reaction of the reagent and substrate are carried out and the finally produced **formazane** is detected.
DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a **biosensor** for detecting the **formazane** obtained by integration of at least the reagent and conductive material-formed working electrode and counter electrode into an electrode system.
USE - For the determination of substrate e.g. amino-acids and alcohol in various samples like blood, urine, food and environmental materials.
ADVANTAGE - The method is simple, quick and accurate, with stable response current, without needing troublesome pretreatment.
Dwg.0/6
FS CPI EPI
FA AB; DCN
MC CPI: B04-B03B; B04-L03D; B06-D14; B07-D13; B10-B02E; B11-C08B; B12-K04; D05-H09; J04-B01
EPI: **S03-E03C**

TECH UPTX: 20001109
TECHNOLOGY FOCUS - INSTRUMENTATION AND TESTING - Preferred Method: The substrate can be alanine, alcohol, aldehyde, isocitric acid, uridine-5'-diphosphoglucose, galactose, formic acid, glyceraldehyde-3-phosphate, glycerol, glycerol-3-phosphate, glucose, glucose-6-phospate, glutamic acid, cholesterol, sarcosine, sorbitol, carbonic acid, lactic acid, 3-hydroxybutyric acid, pyruvic acid, phenylalanine, fructose, 6-phosphogluconic acid, formaldehyde, mannitol, malic acid or leucine. A defined potential is applied to the electrode system and the **formazane** is changed electrochemically, during which the response current is detected.
Preferred **Biosensor**: The potential applied is as already specified with measurement of the response current due to the electrochemical change of the **formazane**.

L91 ANSWER 2 OF 2 WPIX COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 1990-329562 [44] WPIX
DNN N1991-142212 DNC C1992-018345
TI Control and optimisation of industrial chemical process - for dyestuff, whitener and intermediate mfr. by differential UV and visible spectral analysis.
DC E24 J04 S03
IN LANGFELD, H; MINGES, R; PUEBLA, C; SCHMIDT, W
PA (CIBA) CIBA GEIGY AG; (CIBA) CIBA SPECIALTY CHEM HOLDING INC; (CIBA) CIBA SC HOLDING AG; (CIBA) CIBA GEIGY CORP
CYC 13
PI EP 395587 A 19901031 (199044)*
R: BE CH DE ES FR GB IT LI NL
DE 3914185 A 19901031 (199045)
JP 02298341 A 19901210 (199104)
BR 9001975 A 19910730 (199135)
US 5153140 A 19921006 (199243) 16p G01N021-33
DE 3914185 C2 19930211 (199306) 13p G05D021-00
EP 395587 A3 19921125 (199343)
EP 395587 B1 19970312 (199715) DE 20p G01N021-33
R: BE CH DE ES FR GB IT LI NL
DE 59010667 G 19970417 (199721) G01N021-33
ES 2099091 T3 19970516 (199727) G01N021-33
JP 2986840 B2 19991206 (200003) 16p B01J019-00
KR 166584 B1 19990115 (200037) B01J019-00
ADT EP 395587 A DE 1989-3914185 19890428, EP 1990-810313 19900419; DE 3914185 A DE 1989-3914185 19890428; JP 02298341 A JP 1990-115020 19900427; US 5153140 A US 1990-515025 19900424; DE 3914185 C2 DE 1989-3914185 19890428; EP 395587 A3 EP 1990-810313 19900419; EP 395587 B1 EP 1990-810313 19900419; DE 59010667 G DE 1990-510667 19900419, EP 1990-810313 19900419; ES 2099091 T3 EP 1990-810313 19900419; JP 2986840 B2 JP 1990-115020 19900427; KR 166584 B1 KR 1990-5963 19900427
FDT DE 59010667 G Based on EP 395587; ES 2099091 T3 Based on EP 395587; JP 2986840 B2 Previous Publ. JP 02298341
PRAI EP 1990-810313 19900419; DE 1989-3914185 19890428
REP NoSR.Pub; 3.Jnl.Ref; EP 254879; FR 2444271
IC ICM B01J019-00; G01N021-33; G05D021-00
ICS C09B067-00; G01N021-25; G05D011-00
AB EP 395587 A UPAB: 19930928
Control and optimisation of industrial chemical processes for the prodn. of dyestuffs, optical whiteners and their intermediates is carried out by differential analysis of the UV/visible absorption spectra of at least one starting cpd. and at least one reaction prod..
Pref. differential analysis of the momentary UV/visible spectrum of the reaction mixt. is used. UV/visible spectroscopy is used, pref. for on-line control, esp. of the temp., pressure, amt. of starting materials, reaction time and/or pH. The process can be computerised. Analysis shows the concn. ratio and is repeated with predetermined frequency, either with an optical **sensor** in the reaction medium or by taking samples, pref. with a by-pass or valve. For cpds. with unspecific UV/visible spectrum or insufficient difference for analysis, derivs. are used in the

control process. The sample and analyser are connected through a waveguide and the analyser is a spectrophotometer with a row of diodes.

USE/ADVANTAGE - The technique is claimed for use in the mfr. of mono- or polyazo, metal complex azo, anthraquinone, phthalocyanine, **formazan**, azomethin, nitroaryl, dioxazine, phenazine or stilbene dyestuffs and for continuous and esp. discontinuous mfg. processes; for determn. of the concn. of starting materials and/or prod./by-prod. ratios, starting material/prod. concn. ratio and by-prod. concn. and for nuancing a selected tone in dyestuff mfr.; and for on-line control of a computer-integratd, automatic mfg. process. It gives a quasi-real-state measurement and can be used for feed-back and feed-forward control. (Previously notified in Week 9044)

0/8

FS CPI EPI

FA AB; DCN

MC CPI: E24-A; E25; J04-B01A

EPI: S03-E04A9; S03-E14F

ABEQ DE 3914185 C UPAB: 19930928

Improving and optimising the industrial prodn. of dyes, optical brighteners and their intermediates comprises recording the UV-VIS spectra of one or more of the reactants and one or more of the required prods.; storing the spectral data in a computer; and continuous or periodic monitoring of the spectrum of the reaction mixt. during synthesis, comparing the instantaneous spectrum with the computer data by a difference method.

USE - The experimental parameters (e.g. temp., pressure initial compsn., pH, reaction time, etc.) can each be varied and their effects are monitored, until max. yields and optimum quality prevail.

0/8

ABEQ US 5153140 A UPAB: 19930928

On-line controlling and optimising industrial chemical metallising and condensation reactions for dyes prepn., uses UV/VIS spectroscopy. Process comprises (a) recording the UV/VIS adsorption spectra of 1 or more starting cpd. and 1 or more reaction prod; (b) determining spectroscopically the present state of the reaction at specific time intervals by differential analysis of the instant UV/VIS absorption spectrum of the reaction mass and that of the reaction prod(s); and (c) opt. changing temp., pressure, amt. of starting material, reaction time or pH to control difference between the last 2 spectra to zero.

ADVANTAGE - Process can be constantly measured, assessed, and used for feedback and feed-forward control.

0/8

ABEQ EP 395587 B UPAB: 19970410

A process for the on-line control and optimisation of chemical industrial diazotisation, coupling, complexing, condensation, reduction and oxidation reactions for the preparation of dyes, which comprises recording a UV/VIS spectrum of at least one starting compound in order to determine the purity or batch ratio of starting compounds or to determine the cause of deviations from the intended spectrum during the preparatory process, recording a UV/VIS spectrum of at least one reaction product, and, during the preparatory process, controlling and optimising the process, by differential analysis of the instantaneous UV/VIS spectrum of the reaction mass and of the UV/VIS absorption spectrum of the desired reaction product, in such a way that the difference between the spectra becomes smaller, and using the parameters of temperature, pressure, amount of starting materials, reaction time and/or pH for control and optimisation.

Dwg.0/8

=> fil dpci
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PATENTS CITATION INDEX, COVERS 1973 TO DATE

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L92 ANSWER 1 OF 1 DPCI COPYRIGHT 2001 DERWENT INFORMATION LTD
AN 2000-602240 [57] DPCI
DNN N2000-445557 DNC C2000-180326
TI Simple, quick and accurate determination of substrate e.g. amino-acids and alcohol in various samples like blood, urine, food and environmental materials based on enzyme reaction with detection of produced formazane with biosensor.
DC B04 D16 J04 S03
IN NAKAMURA, K; SHINOZUKA, N; YOKOYAMA, T
PA (SAPP-N) SAPPORO IMMUNO DIAGNOSTIC LAB
CYC 17
PI WO 2000057166 A1 20000928 (200057)* JA 21p G01N027-327 <--
RW: AT BE CH DE ES FR GB IT NL PT SE
W: AU CA JP KR PL US
AU 9928538 A 20001009 (200103) G01N027-327
ADT WO 2000057166 A1 WO 1999-JP1392 19990319; AU 9928538 A AU 1999-28538 19990319, WO 1999-JP1392 19990319
FDT AU 9928538 A Based on WO 200057166
PRAI WO 1999-JP1392 19990319
IC ICM G01N027-327
FS CPI EPI

CTCS CITATION COUNTERS

| | | |
|---|---|---|
| PNC.DI | 0 | Cited Patents Count (by inventor) |
| PNC.DX | 2 | Cited Patents Count (by examiner) |
| IAC.DI | 0 | Cited Issuing Authority Count (by inventor) |
| IAC.DX | 2 | Cited Issuing Authority Count (by examiner) |
| PNC.GI | 0 | Citing Patents Count (by inventor) |
| PNC.GX | 0 | Citing Patents Count (by examiner) |
| IAC.GI | 0 | Citing Issuing Authority Count (by inventor) |
| IAC.GX | 0 | Citing Issuing Authority Count (by examiner) |
| CRC.I | 0 | Cited Literature References Count (by inventor) |
| CRC.X | 0 | Cited Literature References Count (by examiner) |

CDP CITED PATENTS UPD: 20010227

Cited by Examiner

| CITING PATENT | CAT | CITED PATENT | ACCNO |
|---|---|---|---|
| WO 200057166 A | A | JP 9286784 A | 1997-558567/51 |
| | PA: | (DOJI-N) DOJIN KAGAKU KENKYUSHO KK; (DOJI-N) DOJINDO LAB CO LTD | |
| | IN: | ISHIYAMA, M; MIYAZONO, Y; SASAMOTO, K; SHIGA, M | |
| | A | US 5387515 A | 1990-343790/46 |
| | PA: | (BRTE-N) BRITISH TECHNOLOGY GROUP LTD; (MACF-N) MACFARLAN SMITH LTD; (NATR) NAT RES DEV CORP | |
| | IN: | BRUCE, N C; GRAY, STEPHENS L D; LOWE, C R; STEPHEN, L D G; STEPHENS, L D G | |

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L1         27493 S E4,E5,E11-E17
L2         47801 S E4+NT
L3         13647 S BIOSENSOR OR BIO SENSOR
               E WO99-JP1391/AP,PRN
               E SHINOZUKA N/AU
L4            15 S E3,E5
               E YOKOYAMA T/AU
L5           297 S E3
               E YOKOYAMA TORU/AU
L6            82 S E3
               E NAKAMURA K/AU
L7          1161 S E3-E9
               E NAKAMURA KEN/AU
L8           577 S E3,E11-E15
               E NAOKI/AU
               E TORU Y/AU
               E KENJI N/AU
L9            11 S L1-L3 AND L4-L8
               E WO99-JP1392/AP,PRN
L10            1 S E3,E4
L11            1 S L10 AND L1-L3
L12           11 S L9,L11
L13           15 S ?SENSOR AND L4-L8
L14           15 S L12,L13
L15       150310 S L1-L3 OR ?SENSOR?
               E FORMAZAN
L16         3682 S E3,E22

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L17            1 S 504-65-4
L18            6 S 504-65-4/CRN

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L19          233 S L17
L20         3688 S L16,L19
L21            5 S L15 AND L20
L22            5 S L15 AND FORMAZAN?
L23            5 S L21,L22
L24            3 S L23 AND (9 OR 17)/SC
L25            1 S L14 AND L20
L26           03 S L24,L25
L27        12003 S L15 AND SUBSTRATE
L28        12304 S L15 AND (ALANINE OR ALCOHOL OR ALDEHYDE OR GALACTOSE OR GLYCE
L29         2330 S L15 AND (ISOCITRIC OR FORMIC OR GLUTAMIC OR CABONIC OR LACTIC
L30           98 S L15 AND (URIDINE 5 DIPHOSPHOGLUCOSE OR GLYCERYLALDEHYDE 3 PHO
               SEL RN L11

     FILE 'REGISTRY' ENTERED AT 13:22:38 ON 19 DEC 2001
L31           32 S E1-E32
L32           31 S L31 NOT L17,L18
L33           16 S L32 AND (ALANINE OR ISOCITRIC ACID OR GALACTOSE OR FORMIC ACI
L34            3 S L32 AND (LEUCINE OR MALIC ACID OR MANNITOL)/CN
L35            6 S L32 AND P/ELS
L36           25 S L33-L35
L37            6 S L32 NOT L36
L38            1 S L37 AND C4H8O3
L39           26 S L36,L38
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     FILE 'HCAPLUS' ENTERED AT 13:26:19 ON 19 DEC 2001
L40         7305 S L15 AND L39
L41        24795 S L27-L30,L40
L42          340 S L41 AND REDOX REACTION+NT/CT
L43         1088 S L41 AND ELECTRIC CONDUCTORS+NT/CT

     FILE 'REGISTRY' ENTERED AT 13:27:51 ON 19 DEC 2001
L44            1 S DEHYDROGENASE/CN

     FILE 'HCAPLUS' ENTERED AT 13:27:55 ON 19 DEC 2001
L45          860 S L41 AND (L44 OR DEHYDROGENASE)
L46           41 S L45 AND L42,L43
L47            2 S L46 AND TETRAZOL?
L48          791 S L41 AND ONIUM COMPOUNDS+NT/CT
L49           15 S L41 AND TETRAZOL?
L50           66 S L48,L49 AND L42,L43
L51           11 S L50 AND L45
L52          206 S REAGENT#/CW AND L15
L53           88 S L52 AND L41
L54           21 S L53 AND L42,L43,L45
L55           19 S L53 AND L48,L49
L56           33 S L54,L55
L57            2 S L51 AND L56
L58            3 S L26 AND L1-L16,L19-L30,L40-L43,L45-L57
                 SEL RN

     FILE 'REGISTRY' ENTERED AT 13:33:25 ON 19 DEC 2001
L59           38 S E33-E70
L60            4 S L59 AND N4C/ES
                 E N4C/ES
L61        86108 S E3

     FILE 'HCAPLUS' ENTERED AT 13:33:56 ON 19 DEC 2001
L62           13 S L60 AND L15
L63           67 S L61 AND L15
L64          129 S ?TETRAZOL? AND L15
L65            4 S L62,L63,L64 AND L23
L66            2 S L65 AND L58
L67            3 S L58,L66
L68            2 S L65 NOT L67

     FILE 'HCAPLUS' ENTERED AT 13:37:09 ON 19 DEC 2001

     FILE 'BIOSIS' ENTERED AT 13:37:41 ON 19 DEC 2001
L69          260 S L17,L18
                 E FORMAZAN
L70         1272 S E2-E18
L71         1272 S L69,L70
L72            8 S L71 AND ?SENSOR?
L73            1 S L72 AND MEASURING/TI

     FILE 'BIOSIS' ENTERED AT 13:40:35 ON 19 DEC 2001

     FILE 'WPIX' ENTERED AT 13:40:47 ON 19 DEC 2001
                 E FORMAZAN/DCN
                 E E3+ALL
L74           17 S E2
                 E FORMAZAN
L75          767 S E1-E20
L76          771 S L74,L75
L77            3 S L76 AND ?SENSOR?
L78            2 S L77 NOT FISH
                 E NAKAMURA K/AU
L79         2086 S E3-E9
                 E SHINOZUKA N/AU
L80            2 S E3
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                E YOKOYAMA T/AU
L81          422 S E3-E5
                E SAPPORO/PA
L82          622 S E3
L83            7 S L79-L82 AND L76
L84          221 S L79-L82 AND ?SENSOR?
L85            1 S L83 AND L84
L86            2 S L78,L85
L87            6 S L83 NOT L86
                E G01N027-327/IC,ICM,ICS
L88         1228 S E3-E5
L89         6084 S S03-E03C#/MC
L90            1 S L88,L89 AND L76
L91            2 S L86,L90

      FILE 'WPIX' ENTERED AT 13:46:27 ON 19 DEC 2001

      FILE 'DPCI' ENTERED AT 13:46:38 ON 19 DEC 2001
                E WO200057166/PN
L92            1 S E3

      FILE 'DPCI' ENTERED AT 13:47:04 ON 19 DEC 2001
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